REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1, 8, 10, 16, 18 and 25-29 are currently being amended. No new subject matter is being added. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, Claims 1-23 and 25-29 are now pending in this application.

I.   Claim Rejections under 35 U.S.C. § 102

On page 2 of the Office Action, Claims 18-22 and 28 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,854,593 (Dykema).

With respect to independent Claim 18, the Examiner stated that:

> Dykema et al. teaches initiating a training sequence (col. 4 lines 27-32);
>
> identifying and storing a control code of the RF control signal (col. 6 lines 14-20, col. 17 lines 15-20);
>
> identifying the data characteristic of the RF control signal (col. 18 lines 15-20) and identifying a frequency based on a data characteristic if the number of rising edges appearing in the received signal over a period of a predetermined time interval (col. 17 lines 1-14).

Applicants respectfully traverse the rejection.

The Examiner stated that Dykema teaches "identifying a frequency based on a data characteristic of the number of rising edges appearing in the received signal over a period of a

predetermined time interval" as shown in column 17 lines 1-14 of <u>Dykema</u>, which states that (emphasis added):

> [i]f microcontroller 57 does not receive a code signal from integrator 84 for the initial frequency, microcontroller 57 in the next loop selects another frequency and provides phase-locked loop circuit with frequency control data corresponding to the new frequency. Microcontroller 57 continues to select new frequencies in this manner until a code signal is detected as indicated by a signal from integrator 84. Microcontroller 57 **affirms the presence of a code signal using a verification routine,** which counts the number of rising edges appearing in any signal received from integrator 84 during a predetermined time interval and **determines that data is present when the counted number of rising edges exceeds a threshold level.** The verification subroutine is described in greater detail below.

The paragraph of <u>Dykema</u> cited by the Examiner describes a verification process for verifying that an identified frequency has a code signal. Once the frequency is identified, the verification routine determines whether the signal received at that frequency is data or mere noise. The verification routine simply indicates that a signal of some sort is present, as opposed to noise, if a predetermined number of rising edges occur within a predetermined time interval. Verifying that an already identified frequency has a code signal is not the same as "determining at least one RF frequency associated with the RF control signal based on the determined device type" as recited in Claim 18, as amended.

Thus, <u>Dykema</u> does not identically disclose, among other elements, "determining at least one RF frequency associated with the RF control signal based on the determined device type" as recited in independent Claim 18, as amended. The rejection of Claim 18 over <u>Dykema</u> is improper. Claim 18 is patentable over <u>Dykema</u>.

Dependent Claims 19-22 and 28, which depend from independent Claim 18, are also patentable for at least the same reasons as Claim 18.

The Applicants respectfully request withdrawal of the rejection of Claims 18-22 and 28 under 35 U.S.C. § 102(b).

II.   Claim Rejections under 35 U.S.C. § 103

A.   *Independent Claims 1 and 10*

On pages 3-4 of the Office Action, Claims 1-3, 5, 8-11, 13-14, 16-17 and 25-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,078,271 (Roddy) in view of U.S. Patent No. 6,556,813 (Tsui).

With respect to independent Claims 1 and 10, the Examiner stated that:

> Roddy et al teaches a transceiver comprising an antenna (figure 1);
>
> A wideband receiver (30) coupled to the antenna for receiving a control signal from a remote transmitter (col. 2 lines 41-50);
>
> A control circuit (24) coupled to the wideband receiver ant the control circuit has a training mode in which the control code is identified and stored (col. 3 lines 14-35) and identify the frequency of the control signal (col. 3 line 55-col. 4 line 15).

However, the Examiner acknowledged that Roddy does not disclose:

> identifying the RF frequency based on the data characteristic of the control signal.

The Examiner stated that Tsui discloses:

> identifying the RF frequency based on the characteristic of the control signal provided by the wave envelope (col. 5 lines 42-51).

The Examiner concluded that:

> It would have been obvious to one of ordinary skill in the art to modify the system of Roddy et al. as disclosed by Tsui because detecting the frequency of the control signal based on the signal

characteristic provides a reliable means for a universal transceiver
to detect and emulate a control signal.

Applicants respectfully traverse the rejection.

Independent Claim 1, as amended, would not have been obvious in view of <u>Roddy</u>, alone
or in any proper combination with <u>Tsui</u> under 35 U.S.C. § 103(a). <u>Roddy</u> alone or in any proper
combination with <u>Tsui</u> does not disclose, teach or suggest a "trainable transceiver for learning
signal characteristics of an RF control signal received from a remote control transmitter used to
remotely actuate a device" comprising, in combination with other elements, "a control circuit ...
configured ... to determine at least one RF frequency associated with the RF control signal based
on the determined device type" as recited in Claim 1, as amended.

<u>Roddy</u> is directed to a programmable transmitter that "includes a receiver for receiving a
coded signal at a desired frequency. The code is stored in memory during a learning mode and is
then retransmitted sequentially at a plurality of frequencies, including said desired frequency.
During this time, the operator observes the device to be operated and indicates to the transmitter
when the controlled device performs the desired function, i.e., when the desired frequency is
transmitted. At that time, the operator presses a button on the transmitter, and the transmitter
stores the most recently transmitted frequency." (<u>Roddy</u>, at Abstract). The microcontroller in
<u>Roddy</u> requires the operator to observe the controlled device and provide an input when the
controlled device performs the desired function as the transmitter sequentially retransmits the
code at a plurality of frequencies. (<u>Roddy</u>, at col. 3 line 55-col. 4 line 15).

Thus, <u>Roddy</u> does not disclose, teach or suggest a "trainable transceiver for learning
signal characteristics of an RF control signal received from a remote control transmitter used to
remotely actuate a device" comprising, in combination with other elements, "a control circuit ...
configured ... to determine at least one RF frequency associated with the RF control signal based
on the determined device type" as recited in Claim 1, as amended.

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Tsui does not remedy the deficiencies of Roddy. Tsui is directed to "a universal transmitter that can detect and emulate a transmission signal" comprising "a detection circuit that detects a frequency ... of a transmitted signal." (Tsui, at Abstract). In particular Tsui teaches that "an op amp 352 provides wave shaping and level shifting to enable accurate reading of the frequency of the detected signal by processor 230." (Tsui, at col. 5 lines 49-51). Thus, Tsui does not disclose, teach or suggest a "trainable transceiver for learning signal characteristics of an RF control signal received from a remote control transmitter used to remotely actuate a device" comprising, in combination with other elements, "a control circuit ... configured ... to determine at least one RF frequency associated with the RF control signal based on the determined device type" as recited in Claim 1, as amended.

Independent Claim 10 recites a "trainable transceiver for learning signal characteristics of an RF control signal received from a remote control transmitter used to remotely actuate a device" comprising "a control circuit ... configured ... to determine at least one RF frequency associated with the RF control signal based on the determined device type" Applicants respectfully submit that Roddy and Tsui do not disclose, teach or suggest the control system of Claim 10 for reasons similar to those provided with respect to independent Claim 1.

To transform Roddy and Tsui into the subject matter of Claims 1 and 10 would require still further modification, and such modification is taught only by the Applicants' own disclosure. Thus, claims 1 and 10, considered as a whole, would not have been obvious in view of Roddy and/or Tsui.

The rejection of Claims 1 and 10 over Roddy in view of Tsui under 35 U.S.C. § 103(a) is improper. Therefore, Claims 1 and 10 are patentable over Roddy in view of Tsui.

Dependent Claims 2-3, 5, 8-9 and 25, which depend from independent Claim 1, are also patentable for at least the same reasons as Claim 1. Dependent Claims 13-14, 16-17 and 26, which depend from independent Claim 10, are also patentable for at least the same reasons as Claim 10.

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B.   Dependent Claims 4, 7, 12 and 15

On page 5 of the Office Action, Claims 4, 7, 12 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Roddy</u> in view of <u>Tsui</u> and further in view of <u>Dykema</u>.

Dependent Claims 4 and 7, which depend from independent Claim 1, are also patentable over <u>Roddy</u> and <u>Tsui</u> for at least the same reasons as Claim 1. The citation to <u>Dykema</u> does not remedy the deficiencies noted in regard to Claim 1. Thus, Claims 4 and 7 are also patentable.

Dependent Claims 12 and 15, which depend from independent Claim 10, are also patentable <u>Roddy</u> and <u>Tsui</u> for at least the same reasons as Claim 10. The citation to <u>Dykema</u> does not remedy the deficiencies noted in regard to Claim 10. Thus, Claims 12 and 15 are also patentable.

C.   Dependent Claims 23 and 27

On page 6 of the Office Action, Claims 23 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Dykema</u> in view of <u>Tsui</u>.

Dependent Claims 23 and 27, which depend from independent Claim 18, are also patentable over <u>Dykema</u> for at least the same reasons as Claim 18. The citation to <u>Tsui</u> does not remedy the deficiencies noted in regard to Claim 18. Thus, Claims 4 and 7 are also patentable.

D.   Independent Claim 29

On page 7 of the Office Action, Claim 29 was rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Dykema</u> in view of <u>Roddy</u>.

With respect to independent Claim 29, the Examiner stated that:

> Dykema et al. teaches initiating a training sequence (col. 4 lines 27-32);

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identifying and storing a control code of the RF control signal (col. 6 lines 14-20, col. 17 lines 15-20);

identifying the data characteristic of the RF control signal (col. 18 lines 15-20) and identifying a frequency based on a data characteristic if the number of rising edges appearing in the received signal over a period of a predetermined time interval (col. 17 lines 1-14);

identifying a manufacturer based on the data characteristic (col. 25 lines 41-65).

However, the Examiner acknowledged that <u>Dykema</u> does not disclose:

a wideband receiver coupled to the antenna.

The Examiner stated that <u>Roddy</u> discloses:

use of a wideband receiver (col. 5 lines 42-51).

The Examiner concluded that:

It would have been obvious to one of ordinary skill in the art to modify the system of Dykema et al. as disclosed by Roddy et al. because the wideband receiver allows transceiver to detect and emulate a control signal of a wide range of frequencies.

Applicants respectfully traverse the rejection.

Independent Claim 29, as amended, would not have been obvious in view of <u>Dykema</u>, alone or in any proper combination with <u>Roddy</u> under 35 U.S.C. § 103(a). <u>Dykema</u> alone or in any proper combination with <u>Roddy</u> does not disclose, teach or suggest a "method for training a transceiver to learn a set of signal characteristics of an RF control signal" comprising, in combination with other elements, "selecting at least one RF frequency from a pre-stored list of frequencies based on the determined manufacturer" as recited in Claim 29.

After identifying the frequency of the received signal, <u>Dykema</u> teaches utilizing a subroutine to determine whether the received code is rolling code. If it is determined that the

code is rolling code, Dykema teaches that "microcontroller 57 examines the characteristics of the received activation signal and compares such information with stored transmitter identification data to determine the make and model of remote transmitter 65. Such characteristics may include the pulse width, pulse repetition rate, number of codes bits, and/or the identified carrier frequency. Based upon an identification of the make and model of remote transmitter 65, microcontroller 57 identifies a cryptographic algorithm." (Dykema, at col. 25 lines 11-50). Dykema first identifies the frequency of the received signal and then determines the make and model of the remote transmitter in order to identify a cryptographic algorithm.

Thus, Dykema does not disclose, teach or suggest a "method for training a transceiver to learn a set of signal characteristics of an RF control signal" comprising, in combination with other elements, "selecting at least one RF frequency from a pre-stored list of frequencies based on the determined manufacturer" as recited in Claim 29.

Roddy does not remedy the deficiencies of Dykema. Roddy is directed to a programmable transmitter that "includes a receiver for receiving a coded signal at a desired frequency. The code is stored in memory during a learning mode and is then retransmitted sequentially at a plurality of frequencies, including said desired frequency. During this time, the operator observes the device to be operated and indicates to the transmitter when the controlled device performs the desired function, i.e., when the desired frequency is transmitted. At that time, the operator presses a button on the transmitter, and the transmitter stores the most recently transmitted frequency." (Roddy, at Abstract). The microcontroller in Roddy requires the operator to observe the controlled device and to provide an input when the controlled device performs the desired function as the transmitter sequentially retransmits the code at a plurality of frequencies. (Roddy, at col. 3 line 55-col. 4 line 15).

Thus, Roddy does not disclose, teach or suggest a "method for training a transceiver to learn a set of signal characteristics of an RF control signal" comprising, in combination with other elements, "selecting at least one RF frequency from a pre-stored list of frequencies based on the determined manufacturer" as recited in Claim 29.

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To transform <u>Dykema</u> and <u>Roddy</u> into the subject matter of Claim 29 would require still further modification, and such modification is taught only by the Applicants' own disclosure. Thus, Claim 29, considered as a whole, would not have been obvious in view of <u>Dykema</u> and/or <u>Roddy</u>.

The rejection of Claim 29 over <u>Dykema</u> in view of <u>Roddy</u> under 35 U.S.C. § 103(a) is improper. Therefore, Claim 29 is patentable over <u>Dykema</u> in view of <u>Roddy</u>.

Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 1-23 and 25-29 under 35 U.S.C. § 103(a).

*   *   *

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date _____ 05/08/2009 _____   By _____ /Jonathan D. Rowell/ _____

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